

Title (en)

By-pass solenoid with integral check valve

Title (de)

Bypass-Magnetventil mit integriertem Rückschlagventil

Title (fr)

Electrovanne de dérivation avec clapet anti-retour intégré

Publication

EP 1107084 A3 20050216 (EN)

Application

EP 00125962 A 20001128

Priority

US 45847199 A 19991209

Abstract (en)

[origin: US6206044B1] A by-pass solenoid (32) with an integral check valve assembly (36) for by-passing excess pump (16) fluid flow. The integral check valve assembly (36) positioned in a first chamber (120) of a valve sub-assembly (52) allows fluid flow from an inlet (34) to an outlet port (40) in a normal mode of operation. Upon actuation of the solenoid sub-assembly (50), the by-pass solenoid (32) diverts excess fluid flow to a by-pass port (42) for re-circulation during periods when fluid flow demand is low and still maintains a fairly constant system pressure. Check valve assembly (36) prevents re-circulated fluid from directly entering the working hydraulic circuit and maintains system pressure. The present invention advantageously provides a compact integral fluid flow control device for bleeding excess pump flow.

IPC 1-7

G05D 16/20

IPC 8 full level

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CPC (source: EP US)

F04B 49/246 (2013.01 - EP US); **F16H 61/0025** (2013.01 - EP US); **G05D 16/2024** (2018.12 - EP US); **F04B 2201/06062** (2013.01 - EP US); **F16H 61/0021** (2013.01 - EP US); **F16H 61/0251** (2013.01 - EP US); **F16H 61/66** (2013.01 - EP US); **F16H 61/66272** (2013.01 - EP US); **Y10T 137/86622** (2015.04 - EP US)

Citation (search report)

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- [X] US 5921526 A 19990713 - NAJMOLHODA HAMID [US]
- [A] US 5069420 A 19911203 - STOBBS THOMAS J [US], et al
- [DA] EP 0875702 A2 19981104 - EATON CORP [US]

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